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25 August 1959

MEMORANDUM FOR THE RECORD

SUBJECT: Visit to BMI Regarding Changes in Incinerator

1. On Thursday, 20 August, I visited Battelle to discuss proposed changes to be made in the incinerator presently under fabrication and assembly. These changes have come about as a result of the tests being conducted on the currently available unit.

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2. The changes proposed for this second incinerator are listed below:

a. The portion of the stainless steel liner that starts to taper inward at the bottom will be welded with a bead weld completely around in order to prevent separation from the vertical wall. On the present unit this is only turned over and a large separation has developed due to the beating this incinerator has taken.

b. A second viewing port will be incorporated at the top, about 90° from the present viewing port, around past the door.

c. A step, for short people to stand on, will be provided for looking into the viewing port. It will consist of an eight inch high stool that will hook onto brackets that will be welded onto the air duct.

d. The two bolts at the bottom of the duct (from the blower to the chamber) will be eliminated. The flange, where the connection is made, will be beefed up. This will allow for bolts to be placed six inches apart rather than the two inches now being used.

e. The V-band flange will be made heavier for connection of the stack to the incinerator proper.

f. A longer handle for regulating the air will be provided to incorporate a mechanical interlock system with the door to prevent opening of the door while the air system is on.

g. If possible something will be done about the liner at the doorway in order to provide a more even entrance.

h. The radiation shield will be made to go 360° around the stack rather than the present 180°.

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i. "Open" and "Closed" will be stencilled on top of the air duct for use with the air valve.

j. Improvement of the damper stop mechanism will be made.

k. If possible tests will be conducted on a new idea for a collector system for the effluents.

3. During the discussions the size of the stack was kicked around. It was learned that in order to reduce the diameter of the stack from sixteen inches to fourteen inches an additional 1 HP would have to be added to the motor.

4. Development of a smaller size version of this incinerator system was also discussed. If each of the dimensions of the present incinerator were reduced by  $\frac{1}{2}$  the capacity of this incinerator would be reduced by approximately  $\frac{1}{8}$ . If the capacity of the incinerator were to be reduced by  $\frac{1}{5}$  the approximate dimensions required would have to be 24 inches I.D., 30 inches O.D., 64 inches high. 10

5. At our earliest possible convenience we are to inform BMI what direction the stack should go on the incinerator that is being built. It is my feeling that it should rise vertically rather than have the fast/bends.

6. Although the project is not mine, and I had no reason other than curiosity to see, I asked to see the incinerators that had been purchased for the evaluation program. A Caloric, Calcinator, Early Morning, were set up and a Wincinator was being assembled. [redacted] mentioned that of the three previous units the Early Morning appeared to have the highest burning rate.

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